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Observations of the Satellites of Uranus. By W. Lassell, Esq.

		Ariel.	Umb.	Titania.			Oberon.		
1856.	G.M.T.	Position (Estimated).	Position (Estimated).	G.M.T.	Position.	Distance.	G.M.T.	Position.	Distance.
	h m	°	°	h m	° ′	″	h m	° ′	″
Nov. 6	11 40	180	335	12 10	41 13		11 52	271 41	
				12 39·5		28·69	12 28·5		37·83
28	10 5	249	215		212	(all estimations)		55	
29	11 15	160	80	11 27	175 36				
				12 48		32·70	12 17·8		42·37
30	10 15	328	50				11 7·0	351 34	
							10 33·0		43·40
Dec. 1	10 25	180		10 33·9	93 31		10 45·9	327 52	
				11 7·2		29·45	11 20·0		41·80
14	10 45	185	280	11 1·0	272 19		11 12·5	339 3	
				11 43·4		29·44	11 29·3		42·66
18	9 50	280	295	10 9·1	112 47		10 25·1	228 5	
				10 43·3		26·91	11 2·3		40·27
26	10 0	210		10 9·9	141 40		10 19·3	17 41	
				10 41·4		30·44	10 30·9		41·79
27	10 2	80	225	10 47·0	96 19		10 57·0	350 44	
				10 35·0		28·30	10 12·4		42·64
28				10 47·5	55 45		10 57·7	326 56	
				10 26·2		29·08	10 3·1		41·35
1857. Jan. 13							9 17·0	76 29	
							9 6·0		37·13

REMARKS.

Nov. 6. The sky gradually became hazy, and the measures of distance were taken with extreme difficulty.

Nov. 28. *Umbriel*, which is generally the faintest of the satellites, was not seen without patient attention for some time. The sky became cloudy before measures of any of the satellites could be procured.

Nov. 29. Vision very diffused and the planet moulding and ill-defined.

Nov. 30. There was a star in magnitude between the brightness of the faintest two satellites and *Titania*, and almost in the path of the latter, so that I was some time in ascertaining its nature. This is a very rare occurrence.

Dec. 14. Taking into account the bright moonlight, *Ariel* and *Umbriel* were remarkably well shown. I don't think the intrinsic brightness of *Ariel* is very inferior to that of *Titania*, but its proximity to the planet renders

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it far more difficult to see. For this reason I have never been able to obtain in England satisfactory measures of distance of these inner satellites.

Dec. 18. Definition very bad and measures most difficult to take.

The instrument used was the 20-feet Equatorial with a magnifying power, generally, of 614.

Bradstones, near Liverpool, 4th April, 1857.

Erratum.—In the *Monthly Notices*, vol. xiii. p. 149, the position of *Oberon*, Nov. 2, instead of 206° 40′ should be 196° 40′. This error was discovered by Dr. Marth, who, in discussing these observations found this measure to stand out greatly from the series; and on reference to my MSS., I find it occurred in an erroneous addition in deducing the angle from the north point from the angle with the parallel.

Note to the Paper on Optical Phenomena in Occultations in the preceding Number. By Professor Powell.

"In my remarks on the observations, I put a suggestion whether the appearance observed by Prof. Challis might not have been a projection. I have since received a letter from that gentleman, in which he states, 'The depression which I noticed at the part of moon's limb when *Jupiter* reappeared was an actual inequality of the limb, and was as conspicuous before and after, as during the occultation.'

"He further observes that what he saw agrees well with Mr. Hartnup's description (*Monthly Notices*, vol. xvii. p. 73). He also saw the second satellite, at its reappearance, bisected by the moon's limb just at the extremity of the same depression.

"I am anxious to take the earliest opportunity of correcting any misapprehension on this point."

On the Correction of Sextant-Observations. By W. H. Simms, Esq.

In two papers recently laid before the Royal Astronomical Society I have discussed in detail the errors to which the several parts of the sextant are liable, and the effects of these errors upon observations made with that instrument. But as in the said papers the subject has been treated at some length, and as practical men, scientific explorers and navigators, who are in the habit of using the sextant, will be glad to have it placed before them in a simple and practical form, I omit on this occasion everything of the nature of investigation, confining myself to formulæ and examples, a careful consideration of which will enable any person tolerably well versed in the manipulation of tables to correct his observations, and thus to obtain results upon which he may rely to a much greater extent than he could upon such as he might obtain

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